TRENDS

Health Spending Projections Through 2013

Growth is projected to slow in 2003 after six consecutive years of acceleration.

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ABSTRACT: The rate of growth in national health expenditures is projected to fall to 7.8 percent in 2003 because of slower private and public spending growth. However, during the next ten years health spending growth is expected to outpace economic growth. As a result, the health share of gross domestic product (GDP) is projected to increase from 14.9 percent in 2002 to 18.4 percent in 2013. The recently passed Medicare drug benefit legislation (not included in these projections) is not anticipated to have a large impact on overall national health spending, but it can be expected to cause sizable shifts in payment sources.

HEALTH SPENDING in the United States is projected to grow 7.8 percent in 2003, a marked slowdown from the 9.3 percent growth experienced in 2002 (Exhibits 1, 2, and 3).[1] A slowdown in overall health spending growth in 2003 would follow six consecutive years of accelerating growth; it reflects the convergence of several factors anticipated to slow spending growth in both the private and public sectors. For public spending, these factors include states' decisions to limit Medicaid spending in light of their fiscal problems and the expiration of some legislated additional Medicare payments. For private spending, growth in health insurance spending per enrollee is projected to slow because of a modest deceleration in medical prices and use. Hospital spending growth, a major factor in the recent acceleration of national health spending, appears to have reached its peak in 2002, and prescription drug spending growth is projected to continue to decelerate in 2003.

These trends are supported by the most recent employment, hours, and earnings data from the Bureau of Labor Statistics (BLS), which show a modest slowdown in growth in health sector hourly wages and employment beginning in 2002 and continuing for 2003, implying slower medical price inflation and use.[2] In fact, growth in personal health care spending slowed slightly in 2002 for every major type of service except hospital care. Despite the projected slowdown in 2003, health spending growth is still anticipated to outpace the rebound in overall economic growth by three percentage points. As a result, the health sector's share of gross domestic product (GDP) is projected to increase to 15.3 percent in 2003, which would be the fifth consecutive year in which more of the nation's resources are allocated to health care.

These projections were completed before the Medicare Prescription Drug, Improve-

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EXHIBIT 1
National Health Expenditures (NHE), Aggregate And Per Capita Amounts, And Share Of Gross Domestic Product (GDP), Selected Calendar Years 1993–2013

Spending category	1993	1998	2001	2002	2003[a]	2004[a]	2005[a]	2013[a]
NHE (billions)	$888.1	$1,150.3	$1,420.7	$1,553.0	$1,673.6	$1,793.6	$1,920.8	$3,358.1
Health services and supplies	856.3	1,112.1	1,370.0	1,496.3	1,613.6	1,730.1	1,853.0	3,241.9
Personal health care	775.8	1,009.6	1,231.4	1,340.2	1,436.5	1,540.7	1,651.5	2,881.2
Hospital care	320.0	378.5	444.3	486.5	518.1	551.7	585.8	934.3
Professional services	280.7	375.7	464.3	501.5	535.8	572.0	611.2	1,075.8
Physician and clinical services	201.2	256.8	315.1	339.5	362.8	386.8	412.0	700.9
Other professional services	24.5	35.5	42.6	45.9	48.3	51.0	54.2	92.8
Dental services	38.9	53.2	65.6	70.3	74.0	78.0	82.3	126.3
Other personal health care	16.1	30.2	40.9	45.8	50.8	56.2	62.6	155.9
Nursing home and home health	87.6	122.7	132.8	139.3	145.2	152.2	160.2	258.2
Home health care[b]	21.9	33.6	33.7	36.1	38.3	40.6	43.2	73.4
Nursing home care[b]	65.7	89.1	99.1	103.2	107.0	111.7	116.9	184.8
Retail outlet sales of medical products	87.5	132.7	190.0	212.9	237.4	264.8	294.4	612.9
Prescription drugs	51.3	87.3	140.8	162.4	184.1	207.9	233.6	519.8
Durable medical equipment	12.8	16.9	18.2	18.8	19.6	20.6	21.5	32.6
Nondurable medical products	23.4	28.6	31.0	31.7	33.6	36.4	39.3	60.5
Government administration and net cost of private health insurance	53.3	64.5	90.3	105.0	120.8	127.9	134.7	233.7
Government public health activities	27.2	38.0	48.3	51.2	56.3	61.4	66.8	127.1
Investment	31.8	38.3	50.6	56.7	60.0	63.5	67.8	116.1
Research[c]	15.6	20.5	31.5	34.3	36.3	38.6	41.5	75.4
Construction	16.2	17.7	19.2	22.4	23.7	25.0	26.3	40.8
NHE per capita	$3,381	$4,179	$5,021	$5,440	$5,808	$6,167	$6,547	$10,709
Population (millions)	263	275	283	285	288	291	293	314
GDP, billions of dollars	$6,642	$8,782	$10,082	$10,446	$10,947	$11,582	$12,219	$18,243
Real NHE[d]	$944.3	$1,114.6	$1,298.4	$1,403.4	$1,490.0	$1,573.3	$1,655.1	$2,367.9
Chain-weighted GDP index	0.94	1.03	1.09	1.11	1.12	1.14	1.16	1.42
Personal health care deflator[e]	0.90	1.04	1.15	1.20	1.24	1.28	1.32	1.78
NHE as percent of GDP	13.4%	13.1%	14.1%	14.9%	15.3%	15.5%	15.7%	18.4%

SOURCES: Centers for Medicare and Medicaid Services, Office of the Actuary; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

NOTES: Numbers may not add to totals because of rounding. 1993 marks the beginning of the shift to managed care.

[a] Projected.

[b] Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care.

[c] Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures" but are included in the expenditure class in which the product falls.

[d] Deflated using GDP chain-type price index (1996 = 100.0).

[e] Personal health care (PHC) chain-type index is constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each of the remaining PHC components (1996 = 100.0).

EXHIBIT 2
National Health Expenditures (NHE), Average Annual Percentage Growth From Prior Year Shown, Selected Calendar Years 1993–2013

Spending category	1993[a]	1998	2001	2002	2003[b]	2004[b]	2005[b]	2013[b]
NHE	11.5%	5.3%	7.3%	9.3%	7.8%	7.2%	7.1%	7.2%
Health services and supplies	11.7	5.4	7.2	9.2	7.8	7.2	7.1	7.2
Personal health care	11.5	5.4	6.8	8.8	7.2	7.3	7.2	7.2
Hospital care	11.2	3.4	5.5	9.5	6.5	6.5	6.2	6.0
Professional services	12.0	6.0	7.3	8.0	6.8	6.8	6.8	7.3
Physician and clinical services	12.3	5.0	7.1	7.7	6.8	6.6	6.5	6.9
Other professional services	16.4	7.7	6.3	7.6	5.2	5.7	6.2	7.0
Dental services	9.7	6.5	7.3	7.2	5.2	5.4	5.6	5.5
Other personal health care	11.7	13.3	10.6	12.1	10.8	10.7	11.4	12.1
Nursing home and home health	14.1	7.0	2.7	4.9	4.3	4.8	5.2	6.2
Home health care[c]	22.1	8.9	0.1	7.2	5.9	6.1	6.6	6.8
Nursing home care[c]	12.7	6.3	3.6	4.1	3.7	4.4	4.7	5.9
Retail outlet sales of medical products	9.7	8.7	12.7	12.0	11.5	11.6	11.2	9.6
Prescription drugs	10.2	11.2	17.3	15.3	13.4	12.9	12.4	10.5
Durable medical equipment	9.3	5.7	2.5	3.3	4.6	4.9	4.7	5.3
Nondurable medical products	8.9	4.1	2.8	2.3	6.0	8.1	8.0	5.6
Government administration and net cost of private health insurance	13.7	3.9	11.9	16.2	15.1	5.9	5.3	7.1
Government public health activities	13.9	6.9	8.3	5.9	10.0	9.2	8.8	8.4
Investment	7.7	3.8	9.8	11.9	5.9	5.9	6.7	7.0
Research[d]	9.4	5.7	15.3	8.9	5.9	6.1	7.7	7.7
Construction	6.5	1.8	2.6	16.8	5.8	5.6	5.2	5.6
NHE per capita	10.4	4.3	6.3	8.3	6.8	6.2	6.1	6.3
Population	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8
GDP	8.4	5.7	4.7	3.6	4.8	5.8	5.5	5.1
Real NHE[e]	5.9	3.4	5.2	8.1	6.2	5.6	5.2	4.6
Chain-weighted GDP index	5.2	1.9	2.0	1.1	1.5	1.5	1.8	2.5
Personal health care deflator[f]	7.4	3.0	3.3	3.9	3.5	3.4	3.3	3.8

SOURCES: Centers for Medicare and Medicaid Services, Office of the Actuary; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

NOTES: GDP is gross domestic product. Numbers may not add to totals because of rounding. 1993 marks the beginning of the shift to managed care. Growth rates are calculated consistent with the National Health Accounts methodology. For example, the 2013 growth rate above is equal to the level of 2013 expenditures over the level of 2005 expenditures; 2013 growth rate is shorthand for 2005–2013 growth rate.

[a] Average annual growth from 1970 through 1993.

[b] Projected.

[c] Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care.

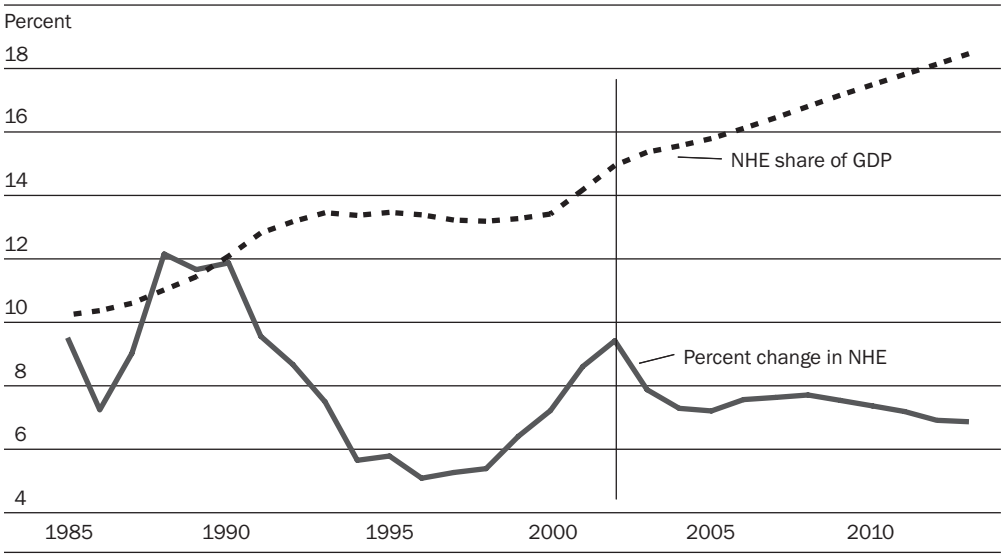
[d] Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures" but are included in the expenditure class in which the product falls.

[e] Deflated using GDP chain-type price index (1996 = 100.0).

[f] Personal health care (PHC) chain-type index is constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each of the remaining PHC components.

ment, and Modernization Act (MMA) of 2003 was signed into law in December 2003. Therefore, the growth path projected for national health spending for 2004–2013, as shown in this paper, can serve as a baseline from which the impact of this legislation can be measured. We plan to update these projections to reflect this legislation as soon as possible. That updated set of projections will attempt to incorporate the projected impact of changes from

EXHIBIT 3
National Health Expenditures (NHE): Percentage Change And Share Of Gross Domestic Product (GDP), Selected Calendar Years 1985–2013



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTE: Vertical line denotes beginning of projections; trend lines to the left of the vertical line represent historical data.

MMA on the health care system based on the official cost estimates and implementation strategies included in the 2004 Medicare Trustees' Report. While a new set of projections will likely show the major shifts among payers for prescription drugs, we must first resolve the several difficult definitional issues surrounding how these data will be reflected in the National Health Accounts.

Private-sector health spending growth is projected to be 7.6 percent for 2004 and 7.4 percent for 2005, a slowdown from the 9.3 percent growth in 2002 and projected 8.9 percent growth in 2003 (Exhibit 4). The major reason for the slower private-sector spending growth is an expectation that growth in private health insurance premiums will be lower than in recent periods as growth in medical prices and use subsides and as the underwriting cycle turns down in 2004 after several years in which premium growth outpaced that of medical benefits. While MMA is not likely to have a large impact on private-sector spending trends in 2004 and 2005, the implementation of the Medicare prescription drug discount card program, together with more widespread offerings of health savings accounts, could affect the projected trends slightly. On the other hand, Medicare spending growth in 2004 and 2005 is likely to be higher than the projections presented here because of the changes in Medicare payments to physicians, hospitals, and providers of other medical services and products. This would slightly increase the aggregate health spending growth we have projected for those years. We discuss some of these impacts later.

Most of MMA's impact on overall health spending growth is expected to occur in 2006. The primary effect would be a shift in the source of payment for prescription drugs from private payers and Medicaid to Medicare. Medicare spending for prescription drugs can be expected to greatly increase in 2006 as the Medicare drug benefit becomes effective, while purchases that were previously paid for out of pocket, through private health insurance, or by Medicaid are likely to be lower in aggregate, although not necessarily for each beneficiary. The overall trend for drug spending growth may be slightly different than presented here, although the magnitude of this

EXHIBIT 4
National Health Expenditures (NHE), By Source Of Funds, Amounts, And Average Annual Growth From Prior Year Shown, Selected Calendar Years 1993–2013

Source of funds	1993	1998	2001	2002	2003[a]	2004[a]	2005[a]	2013[a]
NHE (billions)	$888.1	$1,150.3	$1,420.7	$1,553.0	$1,673.6	$1,793.6	$1,920.8	$3,358.1
Private funds	497.7	629.0	768.4	839.6	914.6	984.0	1,056.6	1,806.0
Consumer payments	445.0	558.2	696.1	762.1	833.7	899.5	967.9	1,669.6
Out-of-pocket payments	146.9	175.3	200.5	212.5	227.0	243.0	260.9	436.2
Private health insurance	298.1	382.9	295.6	549.6	606.7	656.5	707.0	1,233.4
Other private funds	52.7	70.8	72.3	77.5	80.9	84.5	88.7	136.3
Public funds	390.4	521.3	652.3	713.4	759.0	809.6	864.2	1,552.1
Federal	274.4	368.4	460.3	504.7	535.2	569.1	605.0	1,074.8
Medicare	148.3	210.2	246.5	267.1	280.9	295.2	309.3	532.1
Medicaid[b]	76.8	99.7	132.0	147.5	158.3	171.9	187.4	367.7
Other federal[c]	49.3	58.5	81.7	90.1	96.0	101.9	108.3	175.0
State and local	116.0	152.9	192.0	208.7	223.8	240.5	259.3	477.3
Medicaid[b]	44.8	71.9	92.2	102.9	111.0	120.8	131.8	260.9
Other state and local[c]	71.1	81.1	99.8	105.8	112.9	119.8	127.5	216.4
Average annual growth	**1993[d]**	**1998**	**2001**	**2002**	**2003[a]**	**2004[a]**	**2005[a]**	**2013[a]**
NHE	11.5%	5.3%	7.3%	9.3%	7.8%	7.2%	7.1%	7.2%
Private funds	11.0	4.8	6.9	9.3	8.9	7.6	7.4	6.9
Consumer payments	11.0	4.6	7.6	9.5	9.4	7.9	7.6	7.1
Out-of-pocket payments	8.0	3.6	4.6	6.0	6.8	7.1	7.3	6.6
Private health insurance	13.7	5.1	9.0	10.9	10.4	8.2	7.7	7.2
Other private funds	10.9	6.1	0.7	7.2	4.4	4.5	4.9	5.5
Public funds	12.2	6.0	7.8	9.4	6.4	6.7	6.8	7.6
Federal	12.7	6.1	7.7	9.7	6.0	6.3	6.3	7.4
Medicare	13.7	7.2	5.4	8.4	5.2	5.1	4.8	7.0
Medicaid[b]	15.4	5.4	9.8	11.8	7.3	8.6	9.0	8.8
Other federal[c]	8.8	3.5	11.8	10.2	6.6	6.2	6.3	6.2
State and local	11.2	5.7	7.9	8.7	7.2	7.5	7.8	7.9
Medicaid[b]	13.5	9.9	8.7	11.6	7.9	8.8	9.1	8.9
Other state and local[c]	10.2	2.6	7.2	6.0	6.6	6.1	6.4	6.8

SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.

NOTES: Numbers may not add to totals because of rounding. 1993 marks the beginning of the shift to managed care. Growth rates are calculated consistent with the National Health Accounts methodology. For example, the 2013 growth rate above is equal to the level of 2013 expenditures over the level of 2005 expenditures; 2013 growth rate is shorthand for 2005–2013 growth rate.

[a] Projected.

[b] Includes Medicaid and State Children's Health Insurance Program (SCHIP) expansion (Title XIX).

[c] Includes Medicaid and SCHIP expansion (Title XXI).

[d] Average annual growth from 1970 through 1993.

impact is now uncertain. However, the major factors that were expected to slow overall prescription drug spending growth from 15.3 percent in 2002 to 9.2 percent in 2013—several top-selling drugs are scheduled to lose patent protection, and efforts are increasing to require consumers to pay for more of the prescription drug purchase—are likely to slow spending growth despite the impacts of MMA.

Likewise, we expect that the factors that drive our current projections over the entire projection period will remain largely unaffected by MMA's passage. These factors include continued cost-increasing medical innovation, rising input price inflation, continued strong demand for prescription drugs, and the aging of the baby-boomers. Therefore, our current projection that health spending will grow

at an average annual rate that is 2.1 percentage points faster than economic growth over the projection period and eventually reach 18.4 percent of GDP in 2013 is not expected to change substantially, even in light of the effects of this new legislation.

The national health spending projections are generated within a "current-law" framework that incorporates actuarial, econometric, and judgmental inputs. For the purposes of this paper, the term "current law" refers to the period of time prior to MMA's passing, and therefore the projections discussed here do not take into account the legislation's anticipated effects on either the private or public sectors.[3] Projections for Medicare are based on the 2003 Medicare Trustees' Report; Medicaid spending projections are consistent with Trustees' Report assumptions.[4] Projections for private health spending are based on an econometric model that includes behavioral responses to cost trends and the general economy from employers, employees, and other consumers of medical care services.[5] Both the private and public projections use the economic and demographic assumptions from the 2003 Trustees' Report, updated to reflect the latest historical data.[6] Our projections are contingent upon assumptions about macroeconomic conditions and health-sector parameters, with the degree of uncertainty increasing with the projection horizon. We qualify our projections, subject to these inherent uncertainties and how they may affect our results.

Funding Outlook

■ **Medicare spending.** Medicare spending growth was strong in 2001 (9.5 percent) and 2002 (8.4 percent), despite a legislated 4.8 percent decrease in physician reimbursement per service in 2002. Increases in volume and intensity in physician-related services partially offset the per service payment decrease. Provisions in the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act (BBRA) of 1999 and in the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act (BIPA) of 2000 increased payments to some providers, particularly for inpatient hospital, skilled nursing, home health, and therapy services. Some of these additional payment provisions expired in 2003, causing projected Medicare growth to slow to 5.2 percent for 2003. In addition, payments for inpatient hospital outlier cases are expected to be sharply curtailed.[7] For 2003, a −4.4 percent update to physician payments per service was delayed until the Consolidated Appropriations Resolution, 2003, legislated a 1.7 percent increase beginning in March 2003.

As mentioned previously, these projections were completed before MMA's passage and are based on "current-law" assumptions from the 2003 Trustees' Report. In 2004 and 2005 one of MMA's largest impacts would be from increased physician payment updates. Prior to this legislation, the per service physician payment update for 2004 was expected to be −4.8 percent, and the projected update for 2005 was −5.0 percent. The legislation changed the updates to be at least 1.5 percent for 2004 and 2005. However, per service physician payment updates are expected to be negative from 2006 through the end of our projection period, as the sustainable growth rate system adjusts for the higher physician spending legislated in MMA.[8] The revised Medicare managed care program, or Medicare Advantage (formerly known as Medicare+Choice), begins in 2004 with higher payments to participating plans. Additional legislative changes of note prior to 2006 are higher inpatient hospital payments to rural hospitals and the lifting of Medicare therapy caps for 2004 and 2005 (they resume in 2006).[9]

The most significant changes to Medicare from MMA occur in 2006, with the beginning of the new prescription drug plan, or Medicare Part D, and a change in the payment methodology to Medicare Advantage plans. Clearly, the addition of drug coverage to Medicare would dramatically increase Medicare prescription drug spending beginning in 2006. Concerning Medicare Advantage, it is difficult now to determine an impact on overall national health spending. A projected shift in enrollment from fee-for-service Medicare to Medicare Advantage plans would move some dollars within

service categories and is expected to increase overall Medicare spending.

■ **Medicaid spending.** We project Medicaid spending to grow 7.5 percent in 2003, down from 11.7 percent in 2002. The deceleration is attributable to states' decisions to limit Medicaid spending amid fiscal problems and a slowdown in enrollment growth as the economy improved.[10] Enrollment is projected to grow 3.9 percent in 2003, down from 5.9 percent in 2002.

A slowdown in spending growth is projected to occur in two of Medicaid's largest sectors, hospitals and nursing homes, which are projected to grow 3.7 percent and 6.3 percent in 2003, respectively (compared with 11.0 percent and 8.6 percent, respectively, in 2002). The slowdown in hospital spending is the result of states' efforts to limit spending growth for this largest service category. This lower growth in 2003 tends to offset the strong growth of 14.3 percent projected for prescription drugs. Despite this temporary dip, we expect Medicaid growth to accelerate again starting in 2004, peaking at 9.2 percent in 2006 and 2007 and then slowing to 8.3 percent by 2013.

The impacts of MMA are not reflected in the current Medicaid projections. However, beginning in 2006, federal Medicaid spending is expected to decrease markedly because of MMA, as prescription drug coverage for the elderly under Medicaid shifts to Medicare. On the other hand, the federal portion of Medicaid could also see an increase in spending from a higher enrollment of dual eligibles (beneficiaries eligible for both Medicare and Medicaid). As Medicare beneficiaries apply for the Medicare low-income drug subsidy, some will be discovered to be eligible for Medicaid. However, this increase will likely be of a much smaller magnitude than the decrease in drug spending, leading to an overall savings to federal Medicaid. State Medicaid programs should experience a decrease in drug spending in 2006, despite payment of phased-down "maintenance of effort" amounts to Medicare, which will partially offset the savings states would have otherwise received from not paying for prescription drugs for the elderly.

Strong spending growth in home and community-based waivers is projected to affect Medicaid spending during the projection period.[11] These waivers allow states to provide certain types of care, including care that would be optional or not typically covered by Medicaid, for people who would otherwise require hospital, nursing home, or intermediate care facility services. Through these waivers, states can obtain exceptions to normal Medicaid rules on statewideness, comparability, and income and resource rules applicable in the community.[12] In 2003 the waivers are projected to account for 7.5 percent of total Medicaid spending and 58.0 percent of spending for other personal care services. These waivers are projected to grow consistently at double-digit rates, starting from 19.6 percent in 2003 and slowing to 15.0 percent by 2013, and to account for approximately one-fifth of total Medicaid growth between 2002 and 2013.

■ **Private health insurance.** We project private health insurance premiums per enrollee to grow 10.4 percent in 2003, the third consecutive year of double-digit premium growth. However, we believe that premium growth will slow to 7.1 percent in 2005 for two main reasons. First, medical benefit growth per enrollee is projected to decelerate as growth in medical prices and use slows. Second, we continue to project that the underwriting cycle will turn in 2004, although the amplitude of future cycles will not be as large as historical cycles. Thus, after highly profitable years for insurers in 2002 and 2003, premium growth will likely be more in line with benefit growth beginning in 2004.[13] Additionally, we anticipate little change in private health insurance enrollment in 2003 and 2004, as the recovery in the job market lagged behind the recovery in economic growth. This stability would follow a 1.0 percent cumulative decline in enrollment over 2001 and 2002.

The primary impact of MMA on private health insurance spending is expected to be in 2006, when most eligible beneficiaries are likely to enroll in the Medicare drug benefit. Private health insurance spending will be reduced as beneficiaries who now have supple-

mentary coverage choose the Medicare benefit or as employer-sponsored coverage is discontinued. After 2006 the impacts of MMA on private health insurance spending growth are not likely to be as strong. Although the magnitude of this impact is difficult to surmise now, the relationship of growth in private health insurance premiums per enrollee to per beneficiary Medicare spending is likely to be somewhat different through 2013 than shown in these projections. One factor not affected by MMA is that the movement of the baby boomers into the 55–64 age group over the next decade, which is associated with higher use of medical services than younger age cohorts, is expected to boost premium growth for private health insurance enrollees.

"Growth in out-of-pocket spending is projected to accelerate slightly in the near term."

■ **Out-of-pocket spending.** Health insurance shields consumers from much of the cost of health care services at the point of purchase. However, consumers do feel the financial impacts of these rapidly growing costs in the premiums they pay for private health insurance and in the payments they make directly out of pocket. In the National Health Accounts, out-of-pocket payments include deductibles, copayments, and consumer payments for medical care that is not covered by insurance, including payments made by those without any insurance coverage. Premiums paid by consumers are reflected in private health insurance spending.

In contrast to the expected slowdown in premium growth, growth in out-of-pocket spending is projected to accelerate slightly in the near term of the projection period, from 6.0 percent in 2002 to 7.3 percent in 2005. This phenomenon is partly explained by employers' increased attempts to shift costs to employees, such as through premium "buy-downs."[14] Because private health insurance premiums are still expected to grow at a higher rate than out-of-pocket payments, the projected out-of-pocket share of private health spending continues to decline in the projection period. This drop in out-of-pocket health spending share masks an important ramification for consumers: the projected increase in the share of consumer disposable personal income—from 2.7 percent in 2002 to 3.1 percent in 2013—going for out-of-pocket medical costs.[15] This 2013 share would approach the most recent peak of 3.2 percent reached in 1990 and falls just below the all-time high shares experienced before 1974.

Prescription drugs make up the largest share of out-of-pocket spending, 22.9 percent in 2002.[16] Physician and dental services rank second and third, at 16.1 percent and 14.5 percent, respectively. MMA can be expected to have a sizable impact on out-of-pocket spending for prescription drugs on average, although not necessarily for each beneficiary. This impact is expected to be concentrated in 2006, when beneficiaries without current drug coverage enroll in the Medicare drug benefit.

Consumers' utilization patterns for services that are not well insured tend to respond much more quickly to changes in disposable personal income, as consumers absorb more of the cost of care at the point of delivery. For this reason, disposable personal income is a primary driver in our models for the trends in private spending on dental services, other professional care, durable medical equipment, and other nondurable medical products.[17] Although these services are often overlooked because of their small share of aggregate health spending, they have important implications for consumers. A relatively large share of the spending for these services, 46.9, 39.3, and 71.0 percent of total private spending for dental services, other professional services, and durable medical equipment, respectively, was paid out of pocket by consumers in 2002. All private spending was paid out of pocket for other nondurable medical products. These four sectors constitute 38.8 percent of out-of-pocket spending in 2002, even though total spending for these services accounts for only 10.7 percent of national health expenditures. In 2013

these four sectors are projected to account for just 34.4 percent of total out-of- pocket spending, in part because of the higher growth trends projected for prescription drugs (Exhibit 5).

Nursing home services also have a high out-of-pocket share of private spending. In 2002 more than two-thirds of private spending for nursing home services was paid out of pocket. This share is expected to remain relatively unchanged through 2013. However, because nursing home care is predominantly funded by public sources, the out-of-pocket share of total nursing home spending was only 25.1 percent in 2002 and is projected to steadily decline to 22.0 percent in 2013. Out-of-pocket spending behavior for nursing homes differs substantially from that of other high out-of-pocket services because spending behavior is not as closely related to current disposable income trends. A person's out-of-pocket spending for nursing home care occurs mainly after Medicare stops paying nursing home benefits and continues until the individual has spent down his or her assets to the point that he or she is eligible for Medicaid.

Factors Accounting For Growth

The stable growth in personal health care

EXHIBIT 5
Out-Of-Pocket Expenditures, Per Capita Amounts And Distribution By Service, Selected Calendar Years 1993–2013

Spending amount per capita	1993	1998	2001	2002	2003[a]	2004[a]	2005[a]	2013[a]
Personal health care	$559	$637	$709	$744	$788	$836	$897	$1,391
Hospital care	48	43	46	52	55	58	62	94
Professional services	206	189	261	274	287	300	318	453
Physician and clinical services	113	112	117	120	127	134	142	202
Other professional services	27	38	44	46	46	48	50	74
Dental services	67	38	100	108	113	119	125	178
Nursing home and home health	87	114	116	113	116	119	125	173
Home health care[b]	12	24	22	23	24	25	27	43
Nursing home care[b]	75	90	94	91	92	94	98	130
Retail outlet sales of medical products	218	243	285	305	330	358	392	672
Prescription drugs	103	111	150	170	189	209	232	452
Durable medical equipment	29	32	31	30	30	31	32	37
Nondurable medical products	86	100	104	106	111	119	128	182
Distribution of spending								
Personal health care	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hospital care	8.6	6.8	6.5	6.9	7.0	7.0	6.9	6.7
Professional services	36.9	29.7	36.9	36.8	36.4	35.9	35.4	32.6
Physician and clinical services	20.2	17.6	16.5	16.1	16.1	16.0	15.9	14.5
Other professional services	4.7	6.0	6.2	6.1	5.9	5.7	5.5	5.3
Dental services	11.9	6.0	14.2	14.5	14.4	14.2	14.0	12.8
Nursing home and home health	15.6	17.9	16.3	15.2	14.7	14.2	13.9	12.4
Home health care[b]	2.2	3.8	3.0	3.1	3.0	3.0	3.0	3.1
Nursing home care[b]	13.3	14.2	13.3	12.2	11.7	11.2	10.9	9.3
Retail outlet sales of medical products	39.0	38.1	40.3	41.0	41.8	42.9	43.7	48.3
Prescription drugs	18.4	17.4	21.2	22.9	24.0	25.0	25.9	32.5
Durable medical equipment	5.2	5.1	4.3	4.0	3.8	3.7	3.5	2.7
Nondurable medical products	15.4	15.6	14.7	14.2	14.1	14.2	14.3	13.1

SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.

NOTES: Numbers may not add to totals because of rounding. 1993 marks the beginning of the shift to managed care.

[a] Projected.

[b] Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care.

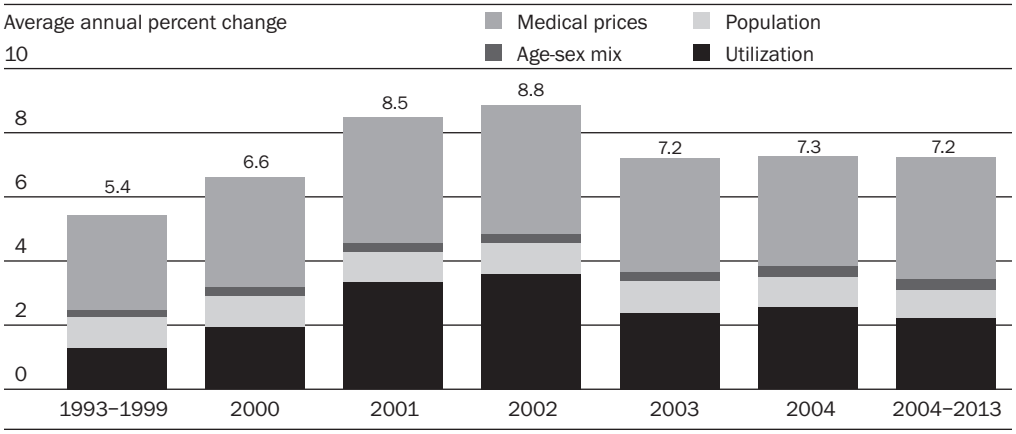
spending from 1994 through 1999 was produced by a roughly steady increase in use and intensity of medical services, offset by a slowing trend in medical price inflation growth.[18] From 1999 through 2002, however, growth in both volume of care and medical prices accelerated to produce the recent rapid personal health care spending growth. Through 2005 we project that both prices and use will grow more slowly than they have recently, yielding the projected slowdown in personal health care spending growth during this period (Exhibit 6). The effects of MMA are not expected to greatly affect the factors contributing to this trend.

The lagged impact of an improving economic environment was the primary driver in the steady increase in the use and intensity of personal health care from 1999 to 2002. Strong labor markets and the accompanying strong income growth affect increases in personal health care spending in our model, with an average lag of about three years. This effect is believed to work primarily through changes in methods of payment and in the institutional structures that affect the delivery of health care. We project that the effects of the recent recession, particularly as evidenced by the sustained weak labor market, will contribute to the slowdown in private personal health care spending, adjusted for growth in medical prices, population, and age-sex effects, beginning in 2004.

The contribution of relative medical output price inflation is dominated by changes in medical input price inflation.[19] Until about 1994, growth in output price inflation consistently exceeded growth in input price inflation. Since that time, however, growth in input and output price inflation has been roughly comparable. The acceleration in input prices appears to be well past its 2001 peak, as wage growth slowed in 2002 and appears to have slowed again in 2003. Based on a lagged relationship to input prices, medical price inflation is projected to slow in 2003.

Fluctuations in profit margins are another determinant of medical price inflation. Recent rising profit margins for providers are believed to be a factor in the higher price inflation from 1999 to 2002 as well. Reports indicate growing provider leverage in price negotiations with

EXHIBIT 6
Factors Accounting For Growth In Personal Health Care Expenditures, Selected Calendar Years 1993–2013



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTES: Utilization includes quality and mix of services. As a residual, this factor also includes any errors in measuring prices or total spending. Medical prices reflect a chain-weighted index of the price for all personal health care deflators. Growth rates are calculated consistent with the National Health Accounts methodology. For example, the 2004–2013 growth rate above is equal to the level of 2013 expenditures over the level of 2004 expenditures. The 2003 growth rate above is calculated as the level of 2003 expenditures over the level of 2002 expenditures. Data for 2003 and beyond are projections.

health plans in recent years, in part because the effects of provider mergers and consumers' demand for inclusive provider networks have weakened the effects of selective contracting.[20] In the short run, these factors can be expected to continue to exert positive pressure on medical inflation relative to the extended period of slower growth in the early to mid-1990s. Based on the combination of these effects, we project that growth in medical prices, as measured by the personal health care deflator, peaked in 2002 at 3.9 percent and will moderate to around 3.3 and 3.5 percent in 2003 and 2005.

The aging of the population has a relatively small impact on overall health spending growth during the projected period, as it has historically.[21] To capture the impact of the changing age-sex composition of the population, we use cross-sectional data on use of and spending for health care services by age and sex.[22] Based on this information, we project that roughly 0.3 percentage point of the 7.2 percent average annual growth in personal health care spending projected from 2002 through 2013 is caused by the changing age- sex mix of the population. The movement of the baby boomers into the 55–64 age cohort means that the under-sixty-five population will become relatively older, while the movement of the leading edge of the baby boomers into Medicare in the last few years of the projection period implies that the over-sixty-five population will become relatively younger. These underlying demographic changes add more than 0.4 percentage point each year on average from 2002 to 2013 to private health insurance spending growth while subtracting more than 0.1 percentage point annually from Medicare spending growth.

"We expect prescription drug spending growth to decelerate from 2003 to 2005 but to still be the fastest-growing health sector."

Spending Outlook

■ **Hospitals.** Growth in spending on hospital care, the largest health care sector in 2002, rose sharply from 3.0 percent in 1998 to 9.5 percent in 2002. The rate of increase in hospital spending, combined with its size, means that this acceleration has been a major factor in the recent historical acceleration in aggregate health care spending growth. Both hospital price inflation and increased use and intensity have contributed to this recent pattern. Hospital price inflation increased from 0.7 percent to 4.9 percent from 1998 to 2002, while inflation for nonhospital medical care increased from 3.1 percent to 3.4 percent over this same period. Growth in hospital use and intensity, as measured by real per capita hospital spending, rose from 1.3 percent in 1998 to 3.4 percent in 2002.

Our projection is that hospital spending growth will slow to 6.5 percent in 2003 and move to 6.2 percent in 2005, as both use and price are anticipated to grow less rapidly than they did in 2002. The 2003 slowdown is most pronounced in the public sector, where growth drops from 9.1 percent in 2002 to 4.4 percent in 2003. Medicare hospital spending growth was rapid in 2001 (8.1 percent) and 2002 (8.8 percent) from the combination of legislation that provided for additional payments for hospital-based nursing home and home health services and lowered coinsurance amounts for outpatient services, and a sizable increase in outlier payments made under the inpatient hospital prospective payment system. In 2003 the legislation providing additional payments expired, and regulatory changes were implemented to reduce the amount of outlier payments.

Although its effects are not reflected in these projections, MMA includes a range of provisions affecting hospitals beginning as early as April 2004. The most notable are the increases in reimbursement to rural hospitals and critical-access facilities beginning in 2004, and the unreduced updates scheduled for 2005–2007 (linked to the submission of quality-reporting data). Only the first set of provisions would alter our projection since Medicare "current law" implies full inflation-

ary updates. The increases in payments to rural hospitals associated with MMA, although substantial for those hospitals, are not expected to be large enough to substantially alter the near-term pattern of growth that we project in aggregate hospital spending.

Private hospital spending growth is projected to slow more moderately in 2003, from 10.1 percent in 2002 to 9.5 percent. A decomposition of BLS data for employment, hours, and earnings through November 2003 implies that growth in hospital price inflation and use probably reached a peak in early 2002. Average hourly earnings show a period of slow growth from about 1994 through 1999, followed by a sharp acceleration to a peak of 6.1 percent at the end of 2001 (based on a year-over-year, twelve-month moving average). Hospitals were forced to offer wage increases sufficient to attract already trained nurses who had exited the profession or who had come from other countries.[23] This contributed to the increases in nursing compensation that are reflected in the average hourly earnings for hospital workers in 2001 and 2002. Hourly wages for hospital workers subsequently decelerated to 4.1 percent by November 2003 as these pressures eased. In addition, data on hours worked (employment times average weekly hours) show a slowdown from the 2001 peak of 3.3 percent to 2.1 percent in 2002, and then a slight uptick to 2.6 percent in 2003. This pattern of growth is roughly consistent with slowing admissions growth reported in data for for-profit hospital chains and with projected sharp declines in hospital use by Medicare and Medicaid beneficiaries.[24]

Growth in spending for inpatient services has accelerated rapidly since 1997, and the average length-of-stay has increased slightly for the first time since 1984.[25] Combined with anecdotal reports of hospital crowding, these factors have prompted assessments that the trend toward slower growth in volume and price for inpatient care has finally reached its limits and that future growth will prove to be much faster than in recent history.[26] Our analysis indicates that the recent resurgence in growth has a major cyclical component and is already beginning to subside. The key factors in this trend are technological change, which increasingly enables procedures to be performed in outpatient settings, and continued pressure from health plans and employers to perform care in the most cost-efficient setting. We project total hospital spending growth to slow slightly from the 6.4 percent average for 2002–2005, eventually reaching 5.6 percent in 2013. As a share of total health spending, hospital care is projected to fall from 31.3 percent in 2002 to 27.9 percent in 2013.

■ **Prescription drugs.** We expect prescription drug spending growth to decelerate from 2003 to 2005 but to still be the fastest-growing health sector. Growth in drug spending peaked in 1999 at 19.7 percent, slowed to 15.3 percent in 2002, and is projected to slow to 13.4 percent in 2003 and 12.4 in 2005. The high rates of growth from 1998 to 2002 were associated with large increases in use, particularly for blockbuster drugs that were heavily advertised.[27] Growth is projected to decelerate in 2003 mainly because of slower growth in drug prices, although we also expect demand for prescription drugs to fall, in part because of the impact of increased use of three-tier drug benefits.[28] Also, new drug introductions and direct-to-consumer advertising, two of the main factors behind the recent acceleration, have begun to grow at much slower rates.[29]

Another reason for the projected drop in prescription drug spending growth is that, according to IMS Health, several top-selling drugs are scheduled to lose patent protection in 2003 and 2004.[30] When a patent expires, the market share of the more costly brand-name drug typically falls sharply while the lower-price generic drug captures a sizable piece of the market. Even if volume increases as a result of lower prices, the total amount spent on that particular class of drug tends to fall. In addition, several health insurers have recently merged to create even larger buying pools.[31] These insurers could use their increased buying power to apply pressure on drug manufacturers to keep the growth of drug prices lower than in previous years.

Beginning in April 2004, MMA authorizes

the creation of a Medicare drug discount card that will allow uninsured Medicare beneficiaries to purchase prescription drugs at prices somewhat below the full retail prices customarily charged to the uninsured. In addition, certain low-income Medicare beneficiaries can receive up to $600 per year in transitional assistance toward the purchase of prescription drugs. We do not anticipate that the Medicare prescription drug card program will greatly alter the projected growth rates in aggregate drug spending for 2004 and 2005, mainly because decreases in prices could be offset by increases in use. Also, only beneficiaries without current drug coverage are eligible to enroll.

The current projections call for a further deceleration in drug spending growth from 2006 through 2013. However, MMA's effect on the growth path of aggregate drug spending is not yet clear. Beginning in 2006, the start of a prescription drug benefit in Medicare will likely cause a dramatic shift in payers. Growth in drug spending by Medicare, which accounted for less than 2 percent of total drug spending in 2002, can be expected to increase sharply. The rate of growth in out-of-pocket, private health insurance, and Medicaid prescription drug spending is likely to slow somewhat. MMA provides greater access to prescription drugs for the elderly population, 38 percent of whom had no prescription drug coverage in 1999.[32] This improved access is likely to create additional use by elderly people who had no insurance coverage for prescription drugs before. However, this increased use might be partially offset by lower drug prices under Medicare coverage for currently uninsured beneficiaries and those with Medigap drug coverage.

Conclusion

After accelerations in every year since 1998, the slowdown projected for 2003 marks a turning point in the growth path of national health spending. From 2006 to 2013 the impact of MMA on aggregate health spending growth is uncertain. However, we can expect a shift in payment from private sources and Medicaid to Medicare, most of which will occur in 2006 with the introduction of Medicare drug coverage.

As with our previous projections of national health spending, we expect health care spending to rise as a share of the nation's resources throughout the projection period.[33] Health spending is projected to account for 18.4 percent of GDP by 2013, up from its current high point of 14.9 percent in 2002. To put this figure in perspective, if personal consumption were to continue to consume roughly two-thirds of GDP over the projection period, then by 2013 more than one of every four dollars of personal consumption would be spent on health care. This scenario would demonstrate that society continues to demand and is willing to pay for medical care that consumes more of its income.

"Society continues to demand and is willing to pay for medical care that consumes more of its income."

The current combination of sharply accelerating health spending, labor markets that have yet to fully recover, and rising budget deficits may be reviving thoughts about cost containment. Although it is unclear what direction new efforts to restrain health costs might take, historical behavior suggests that a continued escalation in health spending of the magnitude of recent experience will likely spur efforts to contain this growth. The form that these efforts take can be expected to shape the nature of health care financing and delivery over the coming decade.

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NOTES

1. Growth rates are calculated consistent with the National Health Accounts methodology: The 2001–2003 average annual growth rate is equal to the level of 2003 spending over the level of 2001 spending raised to the one-half power (the average growth over two years); "2003 growth rate" is shorthand for "2002–2003 growth rate."
2. U.S. Bureau of Labor Statistics, "The Employment Situation: December 2003," 9 January 2004, www.bls.gov/news.release/empsit.nr0.htm (12 January 2004).
3. The "current-law" framework means that our projections do not assume any changes in law over the projection period.
4. Boards of Trustees, *2003 Annual Report of the Boards of Trustees of the Federal Hospital Insurance Trust and Federal Supplementary Medical Insurance Trust Funds*, 17 March 2003, cms.hhs.gov/publications/trusteesreport/2003/tr.pdf (18 November 2003).
5. The results of our aggregate model of overall private personal health care spending are reconciled with separate models for private spending in each sector. For a more complete description of our projections model, see Centers for Medicare and Medicaid Services, "Projections of National Health Expenditures: Methodology and Model Specification," 11 February 2003, cms.hhs.gov/statistics/nhe/projections-methodology (18 November 2003).
6. We use available historical data (as of November 2003) and updated near-term forecasts to make the transition to the 2003 Medicare Trustees' Report assumptions. Overall, these assumptions are consistent with the most recent data and forecasts.
7. CMS, "Medicare: Hospital Inpatient Prospective Payment Systems and 2004 FY Rates, Final Rule," *Federal Register* (1 August 2003): 45345–45672.
8. The sustainable growth rate (SGR) system establishes targets for the rate of growth in physician services based on several factors, including the rate of growth in the real per capita GDP. Adjustments are made to future physician fee schedule updates for actual spending growth differing from the targets established by the SGR. For more detail on the SGR system, see CMS, "Estimated Sustainable Growth Rate and Conversion Factor, for Medicare Payments to Physicians," 25 March 2003, www.cms.hhs.gov/providers/sgr (13 January 2004).
9. Other changes from MMA include frozen payment updates for lab services, ambulatory surgical center services, and durable medical equipment (DME); competitive bidding and Federal Employees Health Benefits Program (FEHBP) pricing for DME; the Part B deductible being indexed to the growth in the Part B financing rates; reduced payment updates for home health services; increased payments for ambulance services; temporary increased physician payments in rural areas; the addition of several preventive screening services; and reduced payments for physician-administered drugs and inhalants.
10. V. Smith et al., *States Respond to Fiscal Pressure: State Medicaid Spending Growth and Cost Containment in Fiscal Years 2003 and 2004; Results from a Fifty-State Survey*, September 2003, www.kff.org/medicaid/kcmu4137report.cfm (13 January 2004).
11. Home and community-based waivers provide for such services as home health aides, respite care, case management, adult day health, and habilitation services. Spending under these waivers is included in the National Health Accounts as other personal care.
12. For more information on home and community-based waivers, see CMS, "Medicaid Home and Community-Based Services Waiver Program," 26 June 2003, cms.hhs.gov/medicaid/1915c/default.asp (13 January 2004).
13. L. Benko, "Going for the Green," *Modern Healthcare*, 18 August 2003.
14. In this context, "buy-downs" refer to changes in the benefit structure offered to employees such as increasing copayments and deductibles, to attain lower premium payments. For a discussion of impacts on premiums and out-of- pocket payments, see B. Strunk et al., "Tracking Health Care Costs: Growth Accelerates Again in 2001," *Health Affairs*, 25 September 2002, content.healthaffairs.org/cgi/content/abstract/hlthaff.w2.299 (12 January 2004).
15. Per capita disposable personal income grows more than one percentage point slower than per capita out-of-pocket spending on health during the projection period.
16. C. Smith, "Retail Prescription Drug Spending in the National Health Accounts," *Health Affairs* (Jan/Feb 2004): 160–167.
17. "Other professional services" are services provided by offices of other health practitioners (not including physicians or dentists). Nondurable medical products are nonprescription drugs and medical sundries including rubber medical sundries, heating pads, bandages, and analgesics. DME is items such as contact lenses, eyeglasses and other ophthalmic products, surgical and orthopedic products, equipment rental, and hearing aids (products tending to have a shelf life of more than three years). For more information on the National Health Accounts, see CMS, "Health Accounts," especially the section on Definitions, Sources, and Methods, 8 January 2004, cms.hhs

.gov/statistics/nhe/default.asp (13 January 2004).

18. When we refer to medical price inflation, we are referring to the personal health care (PHC) chain-type index, constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each of the remaining PHC components (1996 = 100.0).
19. An input price index refers to a price measure associated with the inputs used to provide medical services, such as hospital or physician care. For our purposes, we use the CMS input price indexes, or market baskets, that are discussed at CMS, "Publications and Data Provided by CMS's Office of the Actuary," 5 November 2003, www.cms.hhs.gov/statistics/actuary (13 January 2004).
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21. U. Reinhardt, "Does the Aging of the Population Really Drive the Demand for Health Care?" *Health Affairs* (Nov/Dec 2003): 27–39.
22. Our age-sex factors are developed from survey data on use for a single year by age and sex and from population data from the Trustees' Report. The age-sex population mix varies by year against a static utilization distribution to capture an age-sex effect.
23. P. Buerhaus et al., "Is the Current Shortage of Hospital Nurses Ending?" *Health Affairs* (Nov/Dec 2003): 191–198.
24. J. Gutman, "Publicly Traded Hospital Firms Say Admission Rates Remain Low," *Managed Care Week* (27 October 2003): 3–5.
25. American Hospital Association, "U.S. Registered Community Hospitals," in *Hospital Statistics* (Chicago: AHA, various years). Total hospital spending was derived from the National Health Accounts; the split between inpatient and outpatient spending was obtained from the AHA Annual Survey of Hospitals.
26. D. Schactman et al., "The Outlook for Hospital Spending," *Health Affairs* (Nov/Dec 2003): 12–26.
27. K. Levit et al., "Health Spending Rebound Continues in 2002," *Health Affairs* (Jan/Feb 2004): 147–159.
28. BLS, "Consumer Price Index: October 2003," Press Release, 18 November 2003, www.bls.gov/news.release/pdf/cpi.pdf (18 November 2003).
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30. Ibid.
31. A. Zimm, "Anthem, UnitedHealth to Buy Competitors, Add Members," *Journal News*, 28 October 2003, www.nyjournalnews.com/newsroom/102803/d01a28anthem.html (19 November 2003).
32. M. Laschober et al., "Trends in Medicare Supplemental Insurance and Prescription Drug Coverage, 1996–1999," *Health Affairs*, 27 February 2002, content.healthaffairs.org/cgi/content/abstract/hlthaff.w2.127 (30 December 2003).
33. See S. Heffler et al., "Health Spending Projections for 2002–2012," *Health Affairs*, 7 February 2003, content.healthaffairs.org/cgi/content/abstract/hlthaff.w3.54 (18 November 2003); and S. Heffler et al., "Health Spending Projections for 2001–2011," *Health Affairs* (Mar/Apr 2002): 207–218.